

IN THE CLAIMS:

Please cancel claims 1-5 without prejudice to or disclaimer of the subject matter recited therein.

Please amend claim 6 and add new claim 9 as follows:

LISTING OF CURRENT CLAIMS

Claims 1-5. (Canceled)

Claim 6. (Currently Amended) A power rectifier device, comprising:

an n-drift layer formed on an n+ substrate;

a cathode metal layer formed on a surface of said n+ substrate opposite said n-drift layer;

5 a pair of field oxide regions formed into said n-drift layer, and said field oxide regions separated by a first mesa;

a pair of termination regions ~~surrounded and spaced~~ spaced, respectively, said pair of field oxide regions with a second mesa;

10 said first mesa and said second mesa having trenches formed into said n-drift layer;

~~a p-type doped region~~ four p-type doped regions, respectively, right beneath each of said termination regions and said field oxide regions;

a barrier metal layer formed on sidewalls and bottom of said trenches, and formed on remnant portions of said first mesa and said second mesa; and

15 a top metal layer acted as an anode electrode formed on said barrier metal layer, said field oxide regions and extended to cover a portion of said termination regions.

Claim 7. (Original) The power rectifier device according to Claim 6 wherein said barrier metal layer is formed from the group of Al, AlCu, AlSiCu, Ti, Ni, Cr, Mo, Pt, Zr, and W, Ti/TiN, etc.

Claim 8. (Original) The power rectifier device according to Claim 6 wherein said top metal layer is formed of stack layers of Al, AlCu, AlSiCu or Ti/Ni/Ag.

Claim 9. (New) A power rectifier device, comprising:

an n-drift layer formed on an n+ substrate;

a cathode metal layer formed on a surface of said n+ substrate opposite said n-drift layer;

5 a pair of field oxide regions formed into said n-drift layer, and said field oxide regions separated by a first mesa;

a pair of termination regions spaced apart, said pair of field oxide regions with a second mesa;

10 said first mesa and said second mesa having trenches formed into said n-drift layer;

four p-type doped regions, one of said termination regions and said field oxide regions are located on each of the four p-type doped regions;

a barrier metal layer formed on sidewalls and bottom of said trenches, and formed on remnant portions of said first mesa and said second mesa; and

15 a top metal layer acted as an anode electrode formed on said barrier metal layer, said field oxide regions and extended to cover a portion of said termination regions.